

ABSTRAK

MILAH NURKAMILAH: Keefektifan Pembelajaran Lingkaran Menggunakan *Guided Discovery Learning* dengan *Setting* Kolaboratif Ditinjau dari Prestasi Belajar Matematika, Kemampuan Komunikasi Matematis, dan *Self-Efficacy* Matematis Siswa Kelas VIII SMP. Tesis. Yogyakarta: Program Pascasarjana, Universitas Negeri Yogyakarta, 2015.

Penelitian ini bertujuan untuk mendeskripsikan keefektifan pembelajaran lingkaran menggunakan: (1) *guided discovery learning* ditinjau dari prestasi belajar, kemampuan komunikasi matematis, dan *self-efficacy* matematis siswa kelas VIII SMP, (2) *guided discovery learning* dengan *setting* kolaboratif ditinjau dari prestasi belajar, kemampuan komunikasi matematis, dan *self-efficacy* matematis siswa kelas VIII SMP, dan (3) membandingkan keefektifan keduanya ditinjau dari prestasi belajar, kemampuan komunikasi matematis dan *self-efficacy* matematis siswa kelas VIII SMP.

Penelitian ini merupakan penelitian eksperimen semu dengan desain *pretest-posttest nonequivalent control group design*. Populasi seluruh siswa kelas VIII SMPN 1 Banjarsari Kabupaten Ciamis Jawa Barat yang terdiri dari 9 kelas. Sampel penelitian diambil 2 kelas secara acak. Kelas eksperimen I diberikan pembelajaran *guided discovery learning* sedangkan kelas eksperimen II diberikan pembelajaran *guided discovery learning* dengan *setting* kolaboratif. Instrumen yang digunakan yaitu soal tes prestasi belajar, soal tes kemampuan komunikasi matematis, dan angket *self-efficacy* matematis siswa. Kriteria keefektifan yaitu lebih dari 75 % siswa mencapai: (1) nilai prestasi belajar minimal 76, (2) skor kemampuan komunikasi matematis baik dan sangat baik, dan (3) skor *self-efficacy* matematis tinggi dan sangat tinggi. Analisis data yang digunakan yaitu uji satu proporsi, uji T^2 Hotelling, dan uji *independent sample t-test*.

Hasil penelitian pada taraf signifikansi 5%, menunjukkan: (1) pembelajaran lingkaran menggunakan *guided discovery learning* tidak efektif ditinjau dari prestasi belajar matematika, kemampuan komunikasi matematis, dan *self-efficacy* matematis siswa kelas VIII SMP, (2) pembelajaran lingkaran menggunakan *guided discovery learning* dengan *setting* kolaboratif efektif ditinjau dari kemampuan komunikasi matematis, tetapi tidak efektif ditinjau dari prestasi belajar matematika dan *self-efficacy* matematis siswa kelas VIII SMP, (3) terdapat perbedaan rata-rata peningkatan kemampuan komunikasi matematis siswa antara yang menggunakan *guided discovery learning* dan *guided discovery learning* dengan *setting* kolaboratif, dan (4) pembelajaran lingkaran menggunakan *guided discovery learning* dengan *setting* kolaboratif secara rata-rata lebih unggul dari *guided discovery learning* ditinjau dari peningkatan kemampuan komunikasi matematis, tetapi tidak lebih unggul ditinjau dari rata-rata peningkatan prestasi belajar matematika dan peningkatan *self-efficacy* matematis siswa kelas VIII SMP.

Kata Kunci: *guided discovery learning*, pembelajaran kolaboratif, prestasi belajar matematika, kemampuan komunikasi matematis, *self-efficacy* matematis.

ABSTRACT

MILAH NURKAMILAH: *The Effectiveness of Learning Circle Using Guided Discovery Learning with Collaborative Setting in Terms of Mathematical Achievement, Mathematical Communication Skills, and Mathematical Self-Efficacy of Year VIII Students of Junior High Schools.* **Thesis. Yogyakarta: Graduate School, Yogyakarta State University, 2015.**

This study is aimed at describing the effectiveness of learning circle using: (1) guided discovery learning in terms of mathematical achievement, mathematical communication skills, and mathematical self-efficacy of year VIII students of Junior High Schools; (2) guided discovery learning with collaborative setting in terms of mathematical achievement, mathematical communication skills, and mathematical self-efficacy of year VIII students of Junior High Schools; and (3) comparing the effectiveness both in terms of mathematical achievement, mathematical communication skills, and mathematical self-efficacy of year VIII students of Junior High Schools.

This study was a quasi-experimental study using the pretest-posttest nonequivalent control group design. The research population comprised all year VIII students, consisting of nine classes, of SMPN 1 Banjarsari of Kabupaten Ciamis Jawa Barat. The sample consisted of two classes that were randomly established. The experimental class I used guided discovery learning and the experimental class II used guided discovery learning with collaborative setting. The instrument used to collect data is an achievement test, a mathematical communication skills test, and a student mathematical self-efficacy questionnaire. Effectiveness criteria used is that more than 75 % of students reached : (1) achievement scores of at least 76; (2) mathematical communication skills scores of good and excellent; and (3) mathematical self-efficacy scores of high and very high. Data analysis used a proportion test, the T^2 Hotelling test, and independent sample t-test.

The results of research on significance level of 5%, show that: (1) learning circle using guided discovery learning is not effective in terms of mathematical achievement, mathematical communication skills, and mathematical self-efficacy of year VIII students of Junior High Schools; (2) learning circle using guided discovery learning with collaborative setting is effective in terms of mathematical communication skills, but in terms of mathematical achievement and mathematical self-efficacy of year VIII students of Junior High Schools is not effective; (3) there are differences on average increase of mathematical communication skills taught using guided discovery learning and guided discovery learning with collaborative setting; and (4) learning circle using guided discovery learning with collaborative setting on the average increased is superior to guided discovery learning in terms of mathematical communication skills, but on the average increase is not superior in terms of mathematical achievement and mathematical self-efficacy of year VIII students of Junior High Schools.

Keywords: *guided discovery learning, collaborative learning, mathematical achievement, mathematical communication skills, mathematical self-efficacy.*